

# Cereal Systems Initiative for South Asia (CSISA)

*The role of the International Livestock Research Institute*



## Background

Intensive cereal cropping systems—of rice, wheat and/or maize—together with livestock or aquaculture constitute the main economic activity in many rural areas and provide staple food for millions in South Asia. The decreasing growth rate of cereal grain and residue production, mainly affecting wheat and rice crops, is a cause of major concern, as are issues of resource degradation, labour supply shortages and climate variability.

The Cereal Systems Initiative for South Asia (CSISA) offers comprehensive solutions to complex challenges. A large project, it harnesses science and technology to accelerate cereal production growth in South Asia's most important grain baskets. CSISA leads the development of an overarching strategy designed to maximize the contribution of new science and technology to short- and long-term growth in cereal and livestock production in South Asia. CSISA works in intensive cereal-production 'hubs' in Bangladesh, Nepal and India to boost deployment of existing crop varieties, hybrids and management technologies in order to enhance livestock productivity and improve the quality of market information.

## CSISA develops and disseminates:

- Resource-conserving practices, technologies and services that increase crop yields at reduced water, labour and input costs.

- High yielding, heat-, water- and stress-tolerant cereal varieties to withstand the impact of climatic change in South Asia.
- New information on cropping management practices, livestock feeding and aquaculture management from future-oriented research.
- Improved access to market information and enterprise development.
- Strengthened policy analysis to remove constraints to the adoption of new technologies.
- Strategic partnerships and capacity to help sustain and enhance the scale of benefits of improved cereal growth.

## Key activities of ILRI

As a key partner with CSISA, the International Livestock Research Institute (ILRI) focuses on improving the integration of livestock in cereal systems by:

1. Assessing the quality of crop residues from major cereal crops and incorporating these traits through the use of plant breeding and selection programs, and revised release criteria for new cultivars.
2. Making crop residue fodder markets more efficient and inclusive.
3. Developing and disseminating improved feeding strategies to increase the efficiency of residue-based feeding in mixed farms.
4. Increasing the availability of low-cost feed to local farmers.

## Outcomes

The ILRI component of CSISA has successfully contributed to:

- The development of dual-purposes varieties of rice, wheat and maize in Bihar and Odisha with improved grain and crop residue fodder traits.
- The development and implementation of more resource-efficient dairy feeding practices in Bihar, Odisha, Nepal and Bangladesh. Despite requiring relatively modest changes to the cattle feeding regimes, the more efficient use of existing feed resource have had very positive outcomes for farmers.
- The successfully increase in the quality of concentrate feed for livestock, based on locally available ingredients, to farmers in Bihar and Odisha. In addition, ILRI facilitated the training of eight local service providers (LSP) to supply this feed.

The key challenge facing this project is to scale the benefits out for large numbers of farmers in South Asia.

## Implementation strategy

CSISA is funded by the Bill & Melinda Gates Foundation (BMGF) and the United States Agency for International Development (USAID). The project is undertaken in a partnership between four CGIAR centres—the International maize and Wheat Improvement Center (CIMMYT), the International Food policy research Institute (IFPRI), the International Rice Research Institute (IRRI) and ILRI.

Photo credit:

Page 1: ILRI/Stevie Mann

Page 2: ILRI/Dhiraj Singh

## Contact

Alok Jha

South Asia Regional Representative for ILRI

a.jha@cgiar.org

C-Block, 1<sup>st</sup> Floor, NASC Complex, Dev Prakash Shastri Marg, Pusa Campus, New Delhi, 110012 India



BILL & MELINDA  
GATES foundation



**CIMMYT**  
International Maize and Wheat Improvement Center

**ILRI**  
INTERNATIONAL  
LIVESTOCK RESEARCH  
INSTITUTE



ilri.org

*better lives through livestock*

ILRI is a member of the CGIAR Consortium

Box 30709, Nairobi 00100, Kenya

Phone: +254 20 422 3000

Fax: +254 20 422 3001

Email: ILRI-Kenya@cgiar.org

Box 5689, Addis Ababa, Ethiopia

Phone: +251 11 617 2000

Fax: +251 11 617 2001

Email: ILRI-Ethiopia@cgiar.org